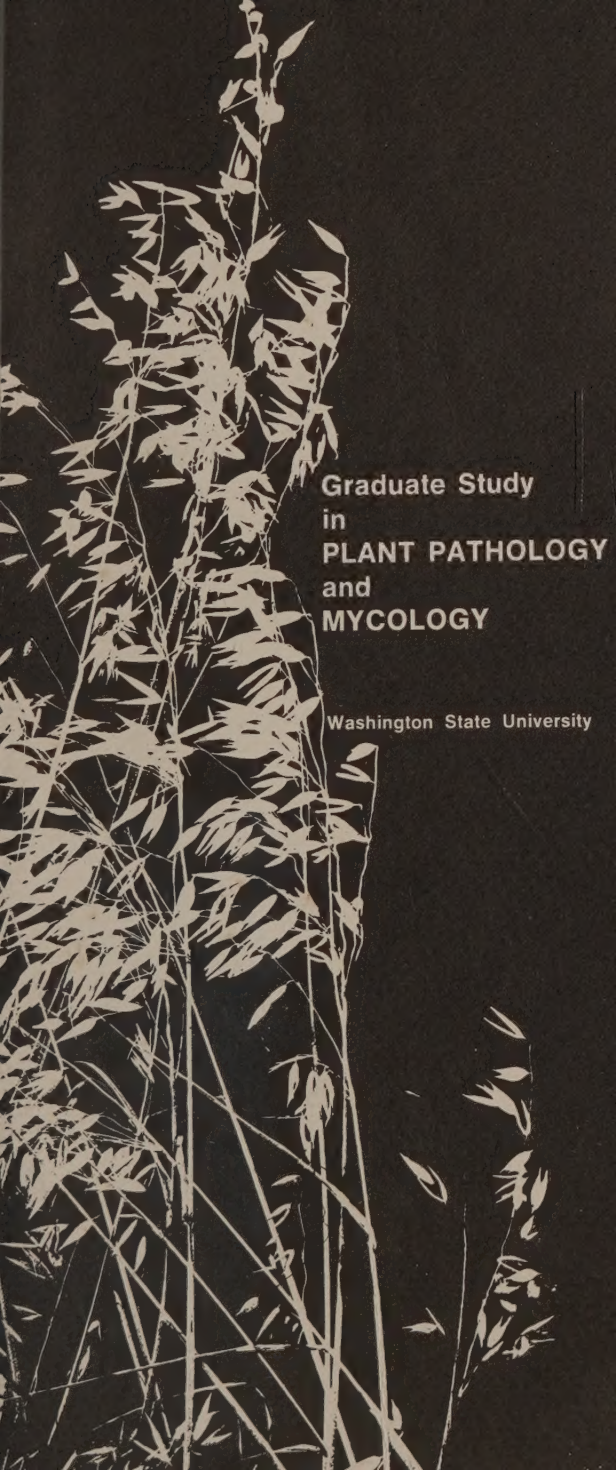


Graduate Study in PLANT PATHOLOGY and MYCOLOGY

Washington State University

This brochure attempts to provide information about the Graduate Program in Plant Pathology and Mycology at Washington State University. Much additional information is contained in the Graduate Study Bulletin and the University Bulletin (catalog). The American Phytopathological Society (our professional organization) has prepared a pamphlet entitled "Careers in Plant Pathology." Copies of any or all of these items as well as answers to other questions can be obtained by writing to:

Dr. C. Gardner Shaw, Chairman
Department of Plant Pathology
Washington State University
Pullman, Washington (99163)

PLANT PATHOLOGY AND MYCOLOGY

Plant Pathology is the study of plant diseases—their causes, effects, and control. Diseases are caused by living organisms (i.e., fungi, bacteria, higher plants, and nematodes), by viruses, nutrient deficiencies, toxic agents, and by climatic factors. Research in **Plant Pathology** aims at answering both applied and basic problems.

Mycology encompasses investigations of the morphology, physiology, cytology, genetics and taxonomy of the fungi. Because so many diseases are induced by fungi, their study is closely correlated with **Plant Pathology.** These two biological sciences encompass varied disciplines, require intense training in biology and other basic sciences, and offer varied and rewarding career opportunities.

The Department of Plant Pathology at Washington State University is responsible for academics and research in both these disciplines.

Plant Pathology in Washington

Plant Pathology is an area of traditional strength in graduate study and research at Washington State University. The Department was founded in 1911 and was one of the first in this University to offer graduate work. For many years (1915-1942) Dr. F. D. Heald, one of America's most famous plant pathologists, was Chairman of the Department. Two faculty members (Drs. G. W. Fischer and C. S. Holton) have served as Presidents of the American Phytopathological Society. The academic program is centered on the main University campus at Pullman. Disease research is conducted not only at Pullman, but also at seven research centers strategically located throughout the state. The forty-one State and Federal Plant Pathologists are divided about equally between the campus at Pullman and the outlying centers. This organization provides a strong, well-balanced program of basic and applied research, of teaching and of adult education.

The Department of Plant Pathology serves all of Washington's agriculture. Its responsibility is to solve disease problems of all crops, including forests, forage, vegetables, fruits, grains, and specialized crops such as ornamentals, nursery crops, turf, and seeds of vegetables and grasses, etc. In

cooperation with Federal Plant Pathologists, and through regional and interregional projects, disease problems of importance throughout the Pacific Northwest and the nation are also investigated.

The Department's large staff and the state's highly diversified agriculture afford unusual opportunities for graduate training and experience in plant disease investigations. The climatic and topographical extremes of the Northwest provide an impressive variety in the mycological flora for the mycologist.

Areas of Specialization

The Department of Plant Pathology offers graduate programs leading to the M.S. and the Ph.D. degrees. Specialization may be on diseases caused by fungi, viruses, nematodes, bacteria or physiogenic agents. Candidates may work on diseases of specific crops, or on root, foliar, or storage diseases. Physiology of disease, biochemical studies of pathogens and diseased plants, means of transmission of pathogenic agents, and genetics of resistance are but a few examples of other possible areas of specialization. Similarly, the student interested in Mycology may emphasize Physiology, Genetics, Ecology, Taxonomy, Cytology or Morphology. For each student a core of academic courses best suited to satisfy his objectives is selected to support the particular area of specialization he chooses.

With Graduate School approval, students interested in obtaining advanced training without working toward a degree are admitted to the Department as non-candidates. Facilities are available for post-doctoral work on specific problems. Inquiries concerning post-doctoral studies are welcome.

PREREQUISITES FOR GRADUATE WORK IN PLANT PATHOLOGY AND MYCOLOGY

Completion of a bachelor's degree strong in biological and/or physical sciences is necessary for admission to graduate study in Plant Pathology or Mycology. Course work or experience in Plant Pathology is not essential; the quality of undergraduate work (at least a B– average) and the applicant's potential are weighed more than the number and type of courses completed as an undergraduate.

A Plant Pathologist must understand the healthy plant, the structure of its cells and their functions; its heredity; and its relationship to its environment. Helpful in this regard is an adequate background in Chemistry, Physics, and Mathematics.

He should gain a basic familiarity with the classification of plants and those groups of pathogenic organisms which cause diseases of plants. He needs to be able to communicate effectively so that he may report his own research and teach others. He should keep himself informed on the progress of his science in other parts of the world and therefore should be able to read foreign languages such as German, French, Spanish and Russian. Superior undergraduate students with majors in Biology, Forestry, Botany, Biochemistry, Microbiology, Agronomy or Horticulture are ideally suited for graduate study in Plant Pathology.

Students who anticipate graduate study in Plant Pathology are advised to include in their undergraduate preparation Chemistry (through Organic or Biochemistry); Mathematics (through Calculus); Botany (including Systematics, Physiology, Ecology, Genetics, and Cytology); Introductory Zoology; Introductory Bacteriology; Physics; and at least one foreign language (German).

THE GRADUATE PROGRAM AT WSU

At Washington State University, as at most universities, the Department of Plant Pathology is essentially a graduate department since serious study in Plant Pathology usually begins at the graduate level. Entering students normally register in an introductory graduate course in Plant Pathology during their first semester. Successful completion of this course followed by an oral qualifying examination before the end of the spring semester permits an early decision on admissibility to further graduate study in Plant Pathology.

Upon acceptance into the graduate program of the Department, each student is assigned an adviser who helps the student plan his program. Each student's program is designed to coordinate formal course work with independent research. The formal courses offered cover a series of interrelated subjects stressing basic principles and concepts in special areas. Each student's education and experience is broadened through the selection of an appropriate minor or minors. Frequently selected minors are: Botany (Plant Physiology, Ecology), Genetics, Biochemistry, Bacteriology, Entomology, Agronomy, Soils, Forestry, or Horticulture. These departments at WSU are well-known for their research programs. Freedom to develop one's own program and to carry it out is emphasized at WSU. The adviser counsels on coursework in light of previous training, experience, aims of the candidate as a scientist, and the thesis problem.

A continuous effort is made to increase each student's experience through participation with

practicing scientists in research, teaching and extension. All faculty members contribute to student achievement and are available for consultation. As soon as practical, the Thesis Committee is nominated by the student, in counsel with the department chairman and the adviser. This Committee, which includes at least one member from the minor department, assumes the previous responsibilities of the adviser and has the added responsibility of directing the thesis research. It also decides when a student has completed his program, whether the candidate displays adequate knowledge in Plant Pathology and his minor field(s), has an aptitude for research and has displayed research ability at a level commensurate with the degree he seeks.

REQUIREMENTS FOR ADVANCED DEGREES

1.
Both the **Master of Science** and the **Doctor of Philosophy** degrees are offered. The Department recommends that beginning graduate students register for the M.S. unless they already hold this distinction. A student wishing to work toward the Ph.D. without first gaining the M.S. may solicit that candidacy at any time in counsel with his adviser or Committee. The M.S. does not indicate full professional training in Plant Pathology but rather preparation for directed research as a member of a research team.

2.
The **Master of Science** degree is awarded to a candidate who demonstrates working competence and ability in Plant Pathology and a related discipline (the minor). Submission of an acceptable thesis, demonstrating independent research, and a final oral examination complete the M.S. program.

3.
The **Doctor of Philosophy** degree is awarded to a candidate who has demonstrated a high degree of competence and ability in Plant Pathology or Mycology and in one or two related disciplines, as evidenced by a comprehensive preliminary examination. Passing this examination advances him to candidacy. He demonstrates in a thesis his ability both to conduct original and independent research and to report his results in writing. The final examination is an oral defense of the thesis.

4.
Foreign language proficiency is required of candidates for advanced degrees. A moderate level of competency in one approved foreign language (measured by the Standard Examination, administered and graded by the Educational Testing Service of Princeton, New Jersey) is required for the M.S. degree. Competency in two approved

languages is required of candidates who seek the Doctor of Philosophy, unless the candidate decides to demonstrate a high level of competency in one foreign language. International students whose native tongue is not English may substitute English for one foreign language.

5.
Residence and enrollment at WSU are required of a candidate for an advanced degree. He must be enrolled during the semester he receives his degree. Twenty-four semester hours of approved residence graduate credit is required to become a candidate for the M.S. degree. For the Ph.D. a student must earn not less than 32 semester hours of approved residence graduate credit in not less than 32 weeks before he may schedule the preliminary examination. Research and thesis is supervised by a member of the department's Graduate Faculty, but may be performed wherever the best facilities are available.

FACILITIES FOR GRADUATE STUDY

The Department of Plant Pathology has excellent facilities in Johnson Hall, a new Plant Sciences building on the campus at Pullman. Each graduate student is provided office space and a desk. Facilities, in addition to ten research and teaching laboratories, include a laboratory for disease diagnosis, controlled environmental chambers, cold storage rooms, modern culturing facilities, a photographic studio and darkrooms, modern physiochemical equipment for biochemical investigations, a special virology-greenhouse laboratory, greenhouses, and field plot space. The Department's excellent Mycological Herbarium is the largest west of the Mississippi (over 56,000 specimens collected from all over the world). The Department's working library has more than 8,000 bound volumes, of which about half are periodicals. More than 60 periodicals, including professional journals in several foreign languages, are received regularly. A reprint collection of over 50,000 separates is kept current by solicitation from leading Phytopathologists and related investigators all over the world. A collection of more than 2,000 kodachrome slides illustrating plant diseases is maintained. The departmental library is augmented by the entire WSU library system which includes over a million bound volumes and maintains 8,800 periodicals. Departmental facilities are augmented by those in other units of the University. These include radioisotope laboratories, a cobalt reactor, electron microscopes and a fully equipped and staffed computing center. Through cooperative arrangements almost any type of special equipment can be utilized for special purposes.

In addition to the facilities at Pullman, the University system includes seven outlying Research Centers or Units. Plant Pathologists are stationed at four of these:

Irrigated Agriculture Research and Extension Center, Prosser, Washington
Emphasis on irrigated agriculture. There are 12 Plant Pathologists at this center. The Rodger Hamilton Laboratory, constructed at a cost of 1.5 million dollars, was dedicated in 1964.

Tree Fruit Research and Extension Center, Wenatchee, Washington
Emphasis on tree fruits. There are seven Plant Pathologists at this Station. The Fred L. Overley Laboratory (cost $917,000) was dedicated Nov. 1, 1967.

Western Washington Research and Extension Center, Puyallup, Washington
Emphasis on vegetables, small fruits and ornamentals. Four Plant Pathologists are located at Puyallup.

Northwestern Washington Research and Extension Unit, Mt. Vernon, Washington
Emphasis is on vegetables and seed crops. One Plant Pathologist is on the faculty.

Although no Piant Pathologists are located at the Coastal Washington Research and Extension Unit, Long Beach; Dry Land Research Unit, Lind; or Southwestern Washington Research Unit, Vancouver, experimental plots utilized for disease investigations are maintained at each. Cooperative agreements with growers, farm organizations and industry make additional plot land and other facilities available to the department.

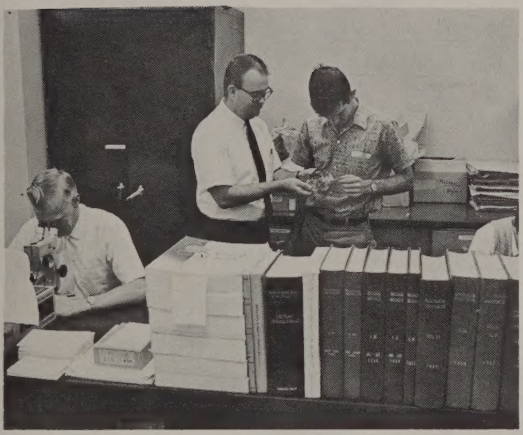
FINANCIAL ASSISTANCE

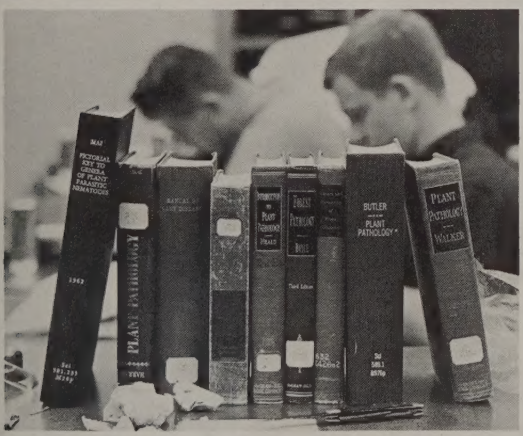
The Department of Plant Pathology offers various types of financial aid to promising graduate students, including fellowships, assistantships, scholarships, and hourly employment. Applicants are considered for whatever type of financial assistance is preferred.

Fellowships

For the most part, fellowships are administered through the Graduate School, whereas assistantships are administered in the Department.

WSU is a participant in the Cooperative Graduate Fellowship program sponsored by the National Science Foundation. Interested students are encouraged to correspond with the Department Chairman concerning application. Inquiries should be made by October 1st to meet early November deadlines. To save time, transcript(s), a statement of purpose

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in undertaking graduate studies, and scores of aptitude tests (e.g. Graduate Record Examination) should accompany the initial inquiry. The junior year is timely for majors in Biological Sciences to start investigating the University they wish to attend and possible sources of financial aid.

National Defense Education Act (NDEA) Fellowships, National Science Foundation (NSF) Traineeships, and National Aeronautical and Space Administration (NASA) Traineeships are available to graduate students in the department. These fellowships provide $2,400-$2,800 in addition to university fees for the full year and additional allowances for each dependent.

A Fellowship is an outright grant, tax free and unencumbered by work or service obligation to the Department. Hence, they are awarded on a highly competitive basis only to the top contenders.

Students interested in Graduate Study are reminded that they may also apply directly to many other Foundations and organizations for fellowships and other financial aid. For example, both the National Institutes of Health and the National Science Foundation offer pre-doctoral Fellowships. Many commercial companies support Fellowships for dependents of their employees or students interested in specific fields of study. Applications for these should be made directly to the agency concerned.

Assistantships

An assistantship is a University appointment for services rendered and is financed from several sources: Washington State University; the Washington Agricultural Research Center (research); the WSU College of Agriculture (teaching); the Washington Cooperative Extension Service; and Research Grants from Federal agencies, Industry, WSU Research Committee, Commodity Commissions, etc. Assistantships are closely aligned with active research projects or the teaching and extension programs. Applicants are selected to fill research assistantships by the principal investigator of a project. Teaching assistants are selected by the Department Chairman, to whom inquiries concerning all types of assistantships should be addressed.

International students, as well as citizens of the United States, are considered for appointment to assistantships. The only additional requirement for international students is that they demonstrate proficiency in English by a standard test such as that administered by the Educational Testing Service, Princeton, New Jersey 08540, U.S.A. This organization administers such a test at more than 60 localities around the world several times a year. International students whose native tongue is not English are urged to make arrangements to take the English Competency Test prior to application for admission or financial assistance.

Stipends for Assistantships

University schedule for 1968

Departmental Research Assistantships (9 mos.)	$2,900.25
Departmental Research Assistantships (annual)	3,544.80
Teaching Assistantships (9 mos.)	
"Pre-Master"	3,100.50
"Post Master"	3,251.25
Extension Assistantships (2½ mos., summer)	805.52

Assistants appointed for nine months may also be appointed for 2½ additional months during the summer at $322.25 per month, funds permitting. Assistants on half-time appointments may enroll for up to 10 hours of course and research credit per semester, and 5 hours during the summer session.

Assistantships are normally half-time positions on the staff of Washington State University, and an average of 20 hours of service to the University is required each week. So that graduate assistants may make normal academic progress, appointments requiring more than half time (e.g. ⅝ or ¾) service are not normally considered. Assistantships carry exemption from non-resident tuition, but not from the regular graduate tuition and fees of $177.50 per semester. Reappointment can be expected, subject to satisfactory academics and stipend service.

Scholarships

Tuition Scholarships are available for international students not holding assistantships. Inquiry concerning these scholarships may be addressed either to the Department Chairman or to the Office of International Programs at Washington State University.

Technical Aide Positions

Approximately twenty technical aides are employed at Pullman and the outlying stations. Most of these positions are full-time and there is little turnover. However, vacancies do occur and inquiries from interested individuals are always welcome. A full-time employee may take up to nine hours of academic credit each calendar year and is permitted to adjust his work schedule to make up for time spent in class.

HOUSING AND FAMILY INFORMATION

Washington State University operates several residence halls for single students. Graduate students are separately housed in their own residence hall. Furnished and unfurnished apartments are available for married students. Information about living accommodations on campus may be obtained from the Office of Housing and Food Service, Rogers 142, Washington State University.

The community of Pullman (population over 18,000) normally provides a substantial portion of the housing requirements of graduate students. Inquiries about such housing should be addressed to the Chamber of Commerce, 921 Grand, Pullman, Washington.

There are numerous opportunities for wives of graduate students to secure employment within the structure of the University. Wives of majors in Plant Pathology may not work for this Department, but may work in other Departments as stenographers, secretaries, laboratory technicians, library attendants, and clerks. Details on working opportunities may be obtained from the Staff Personnel Office, Administration Annex 107, Washington State University. Many opportunities are also available in the local community.

APPLICATION AND ADMISSION

Inquiries regarding financial assistance, as well as matriculation, should be addressed to the Department Chairman, who will supply the necessary application forms. The completed forms and supporting credentials should be submitted in November or December if possible, and at least by January 15th each year. Successful applicants will be notified by March 1st.

PERSONNEL

Any member of the Department's Graduate Faculty (G) may supervise graduate research. The Chairman of a student's Thesis Committee is selected from this group. Any member of the faculty may serve on Thesis Committees and all are available for guidance and help. The faculty includes not only the academic staff, but also the research staff, Plant Pathologists employed by the U.S. Department of Agriculture and the Washington State Department of Agriculture. The principal areas of interest and specialization of our faculty are as follows:

M. D. Aichele (B.S. 1952, Wash. State). Collaborator in Plant Pathology, Wash. State Dept. of Agr. Tree fruit viruses, quarantine, nursery improvement. (Irrigated Agriculture Research and Extension Center, Prosser)

E. C. Blodgett (B.S. 1929 and M.S. 1930, Idaho; Ph.D. 1934, Wisconsin). Collaborator in Plant Pathology, Wash. State Dept. of Agr. (G). Tree fruit viruses, quarantine, nursery improvement. (Irrigated Agriculture Research and Extension Center, Prosser)

G. W. Bruehl (B.S. 1941, Arkansas; Ph.D. 1948, Wisconsin). Professor (G). Research — Cereal diseases (foot and root rots, snowmold, viruses, breeding). Teaching—Diseases of Plants, Diseases of Field Crops.

C. W. Burke (B.S. 1947 and M.S. 1948, Wyoming; Ph.D. 1955, Wash. State). Collaborator in Plant Pathology, USDA (G). Research—Soil microbiology, bean diseases. (Irrigated Agriculture Research and Extension Center, Prosser)

H. B. Busdicker (B.S. 1928, North Dakota). Pathologist, ARS, USDA. Plant Pest Control.

P. W. Cheney (B.S. 1939, College Puget Sound). Pathologist USDA. Research—Tree fruit viruses. (Tree Fruit Research and Extension Center, Wenatchee)

R. J. Cook (B.S. 1958 and M.S. 1961, North Dakota State; Ph.D. 1964, California at Berkeley). Collaborator in Plant Pathology, USDA; and Asst. Professor (G). Research—Cereal Diseases (root and foot rots). Biology and taxonomy of Fusarium.

R. P. Covey (B.S. 1956, M.S. 1959, and Ph.D. 1961, Minnesota). Assistant Plant Pathologist. Research—Tree fruit diseases. (Tree Fruit Research and Extension Center, Wenatchee)

A. D. Davison (B.S. 1955 and M.S. 1956, Wyoming; Ph.D. 1962, Oregon State) Extension Plant Pathologist. Research—Diseases of vegetable crops. (Western Washington Research and Extension Center, Puyallup.)

S. M. Dietz (B.S. 1950, Oregon State; Ph.D. 1962, Wash. State). Pathologist, USDA. Research—Diseases of introduced plants.

R. Duran (B.S. 1954, Calif. Poly.; Ph.D. 1958, Wash. State). Associate Professor (G). Research—Physiology, genetics and taxonomy of smuts. Teaching—Mycology (Basidiomycetes; Myxomycetes and Phycomycetes).

G. D. Easton (B.S. 1952 and M.S. 1954, Idaho; Ph.D. 1957, Wisconsin). Associate Plant Pathologist. Research—Potato diseases, soil microbiology. (Irrigated Agriculture Research and Extension Center, Prosser)

L. R. Faulkner (B.S. 1952 and M.S. 1954, Colorado State; Ph.D. 1959, Wisconsin). Associate Nematologist (G). Research—Plant parasitic nematodes (culture, taxonomy and control). Teaching—Nematodes and Nematode Diseases of Plants. (Irrigated Agriculture Research and Extension Center, Prosser)

G. W. Fischer (B.S. 1928, Butler; M.S. 1929, Northwestern; Ph.D. 1934, Michigan). Emeritus. Research —Taxonomy and physiology of smuts.

P. R. Fridlund (B.A. 1942, Augsburg; M.S. 1952, and Ph.D. 1954, Minnesota). Plant Pathologist (G). Research—Deciduous tree fruit viruses. (Irrigated Agriculture Research and Extension Center, Prosser)

R. L. Gabrielson (B.A. 1952, San Diego State; Ph.D. 1961, California at Davis). Associate Plant Pathologist. Research—Diseases of vegetable crops. (Western Washington Research and Extension Center, Puyallup)

C. J. Gould (B.A. 1934, Marshall College; M.S. 1937, and Ph.D. 1942, Iowa State). Plant Pathologist (G). Research—Diseases of ornamentals (bulbs, turf, woody perennials). (Western Washington Research and Extension Center, Puyallup)

S. O. Graham (B.A. 1941, Nebraska; Ph.D. 1954, Wash. State). Associate Professor (G). Research—Physiology of parasitism, disease methodology. Teaching—Virology, Methods and Techniques)

L. A. Hadwiger (B.S. 1955 and M.S. 1959, Oklahoma State; Ph.D. 1962, Kansas State). Assistant Professor (G). Research—Physiology, biochemistry. Teaching—Physiology and Variation of Pathogenic Relations; Non-infectious and Bacterial Diseases)

W. A. Haglund (B.S. 1953, M.S. 1958 and Ph.D. 1960, Minnesota). Associate Plant Pathologist (G). Research—Pea and strawberry root rots, nematode diseases. (Northwestern Washington Research and Extension Unit, Mount Vernon)

J. W. Hendrix (B.S. 1937, North Carolina; M.F. 1940, Yale; Ph.D. 1947, Minnesota). Professor (G). Research—Stripe rust of cereals, air pollution. Teaching—Introductory Plant Pathology, Principles and Practices of Plant Disease Control.

J. A. Hoffmann (B.S. 1954, Utah State; Ph.D. 1961, Wash. State). Collaborator in Pathology, USDA; and Associate Professor (G). Research — Biology of dwarf bunt of winter wheat and grasses.

C. S. Holton (B.S. 1927, Louisiana; Ph.D. 1932, Minnesota). Collaborator in Pathology, USDA; and Professor (G). Research—Smut diseases of wheat and oats. Leaf spots of winter wheat.

W. G. Hoyman (B.S. 1928, Coe; M.S. 1932 and Ph.D. 1940, Iowa State). Pathologist USDA (G). Research —Breeding for resistance to potato diseases. (Irrigated Agriculture Research and Extension Center, Prosser)

F. Johnson (B.S.1934 and Ph.D. 1939, Wash. State). Plant Pathologist (G). Research—Diseases of small fruits (raspberries, strawberries, cranberries). (Western Washington Research and Extension Center, Puyallup)

H. D. Kirkpatrick (B.S. 1941, Wash. State; M.S. 1942, Idaho; Ph.D. 1948, Cornell). Collaborator in Plant Pathology, USDA (G). Research—Virology (purification; chemotherapy). (Tree Fruit Research and Extension Center, Wenatchee)

J. M. Kraft (B.S. 1960, Arizona State; M.S. 1962, Minnesota; Ph.D. 1966, Calif. at Riverside). Pathologist, USDA. Research—Diseases of Legumes.

(Irrigated Agriculture Research and Extension Center, Prosser)

R. C. Lindner (B.A. 1936, California at Berkeley; Ph.D. 1939, Chicago). Plant Pathologist (G). Administrative—Station Superintendent. Research—Virology (techniques, chemotherapy). (Tree Fruit Research and Extension Center, Wenatchee)

S. B. Locke (B.S. 1933, Oregon State; M.S. 1935 and Ph.D. 1937, Wisconsin) Professor (G). Research—Potato viruses, onion diseases. Teaching—Diseases of Horticultural Crops, Advanced Principles and Theory.

J. J. McRitchie (B.A. 1954, DePauw; M.S. 1956, and Ph.D. 1960, Ohio State). Assistant Plant Pathologist. Research—Virus inactivation. (Tree Fruit Research and Extension Center, Wenatchee)

O. C. Maloy (B.S. 1951 and M.S. 1955, Idaho; Ph.D. 1958, Cornell). Extension Plant Pathologist (G). Research—Soil microbiology, forest pathology.

G. I. Mink (B.S. 1956, M.S. 1958, and Ph.D. 1962, Purdue). Associate Plant Pathologist (G). Research—Virology (purification, serology). (Irrigated Agriculture Research and Extension Center, Prosser)

M. R. Pack (B.S. 1949, Brigham Young; Ph.D. 1952, Rutgers). Associate Plant Physiologist. Research—Effect of air pollutants on plants. (College of Engineering, Pullman)

C. L. Parish (B.S. 1959, Wash. State; Ph.D. 1965, Arizona) Collaborator in Plant Pathology, USDA. Research—Tree Fruit Viruses. (Tree Fruit Research and Extension Center, Wenatchee)

C. F. Pierson (B.A., 1948 and M.S. 1950, Wayne; Ph.D. 1953, Wisconsin). Collaborator in Plant Pathology, USDA (G). Research—Storage and marketing diseases of fruits. (Tree Fruit Research and Extension Center, Wenatchee)

J. D. Rogers (B.S. 1960, Davis and Elkins; M.F. 1960, Duke; Ph.D. 1963, Wisconsin). Assistant Professor (G). Research—Forest pathology, cytology of fungi. Teaching—Forest Pathology, Mycology (Ascomycetes, Fungi Imperfecti)

C. G. Shaw (B.A. 1938, Ohio Wesleyan; M.S. 1940, Pennsylvania State; Ph.D. 1947, Wisconsin). Professor and Chairman of Department (G). Research—Forest pathology, mycology (Herbarium Director, downy mildews). Teaching—Field Mycology.

M. J. Silbernagel (B.S. 1957, Washington; Ph.D. 1961, Wash. State). Pathologist, USDA. Research—Breeding for disease resistance in beans and peas. (Irrigated Agriculture Research and Extension Center, Prosser)

C. B. Skotland (B.S. 1950, Utah State; Ph.D. 1953, Wisconsin). Plant Pathologist (G). Research—Diseases of vegetables, hops and mint. (Irrigated Agriculture Research and Extension Center, Prosser)

P. E. Thomas (B.S. 1958, Illinois; M.S. 1962 and Ph.D. 1966, Wisconsin). Pathologist, USDA. Research—Virus diseases. (Irrigated Agriculture Research and Extension Center, Prosser)

V. E. Wilson (B.S. 1947 and M.S. 1949, Colorado State; Ph.D. 1955, Iowa State). Pathologist, USDA. Research—Diseases of peas and lentils, breeding for disease resistance.